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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/505,627	02/16/2000	Nobuhiro Ito	35.C14241	5922
5514	7590	06/07/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			TALBOT, BRIAN K	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/505,627		ITO, NOBUHIRO	
	Examiner		Art Unit	
	Brian K. Talbot		1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 57-80 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 57-80 is/are rejected. 57-69 and 71-80 (57-69 and 71-80)
- 7) ☐ Claim(s) 70 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/21/05</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1762

1. The amendment filed 3/21/05 has been considered and entered. Claims 1-5,8-14,16-31,34-38,40 and 42-50 have been canceled. Claims 57-80 have been added and are the only remaining claims active in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 57-80 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 57, the term “pretreated” is vague and indefinite because the claim includes elements not actually disclosed (those encompassed by "pretreatment"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

With respect to claim 63, the phrase “is limited” is vague and indefinite because it is unclear how the sprayed material is “limited”.

With respect to claim 64, the phrase “film forming step” is vague and indefinite because the claim fails to recite the steps utilized to produce the film.

Art Unit: 1762

The term "high resistance film" in claim 74 is a relative term which renders the claim indefinite. The term "high" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

4. Claims 57-69 and 71-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dean et al. (5,726,529), Spindt et al. (5,614,781) or Nonomura et al. (5,083,058) further in view of Shibata et al. (6,153,973).

Dean et al. (5,726,529) (abstract, Figs. 1-10, col. 1, line 65 – col. 2, line 12 col. 4, lines 50-60 and col. 6, lines 35-45), Spindt et al. (5,614,781) (abstract, Fig. 2A,6,9B,12A-12D, col. 2, line 28 – col. 4, line 10) or Nonomura et al. (5,083,058) (abstract, Fig. 5, col. 3, line 50 – col. 4, line 15) all teach coating the spacer walls with a conductive material including electrodes by a variety of coating processes including, spraying, dipping, evaporation, sputtering, CVD, printing, etc.

While the Examiner acknowledges the fact that the references are silent upon the coating material being liquid and the coating being emitted, it is the Examiner's position that these coating techniques disclosed above incorporate a "liquid" coating material and a source of the coating material, i.e. emitter. Hence, the claimed limitations are taught or at least suggestive by the prior art.

Dean et al. (5,726,529), Spindt et al. (5,614,781) or Nonomura et al. (5,083,058) fail to teach coating the spacer by an "emitting portion", i.e. and ink-jet method.

Art Unit: 1762

Shibata et al. (6,153,973) teaches a spacer and image forming apparatus and method of manufacturing whereby the spacer is coated by an ink-jet method (col. 10, lines 8-11, col. 22, lines 12-23, col. 39, lines 60-67, col. 41 line 40 and col. 42, line 40) See also Figs. 3,4,5A,5B,6A,7A-7C and Fig11).

Therefore it would have been obvious at the time the invention was made to have modified Dean et al. (5,726,529), Spindt et al. (5,614,781) or Nonomura et al. (5,083,058) spacer coating process by incorporating an ink-jet method for coating as evidenced by Shibata et al. (6,153,973) with the expectation of achieving similar success.

Allowable Subject Matter

5. Claims 70 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

The prior art fails to teach the spacer substrate having the relationship claimed after the pretreatment step. While the step of pretreating is commonplace in the coating art, the particular relationship claimed would not be.

Response to Amendment

Applicant argued that the prior art fails to teach pretreating the spacer substrate prior to the coating step.

While the Examiner acknowledges the fact that the references are silent with respect to the methods for forming the “rounded or tapered cross section of the spacer”, i.e. instant applications “pretreatment step”, it is the Examiner’s position that one skilled in the art at the time the invention was made would have had a reasonable expectation of achieving similar results with the claimed “pretreatment step” as the step of pretreating a substrate prior to coating is commonplace absent the showing of unexpected results garnered from the step. The prior art teaches tapered or rounded spacers (see above).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1762

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian K Talbot
Primary Examiner
Art Unit 1762

BKT